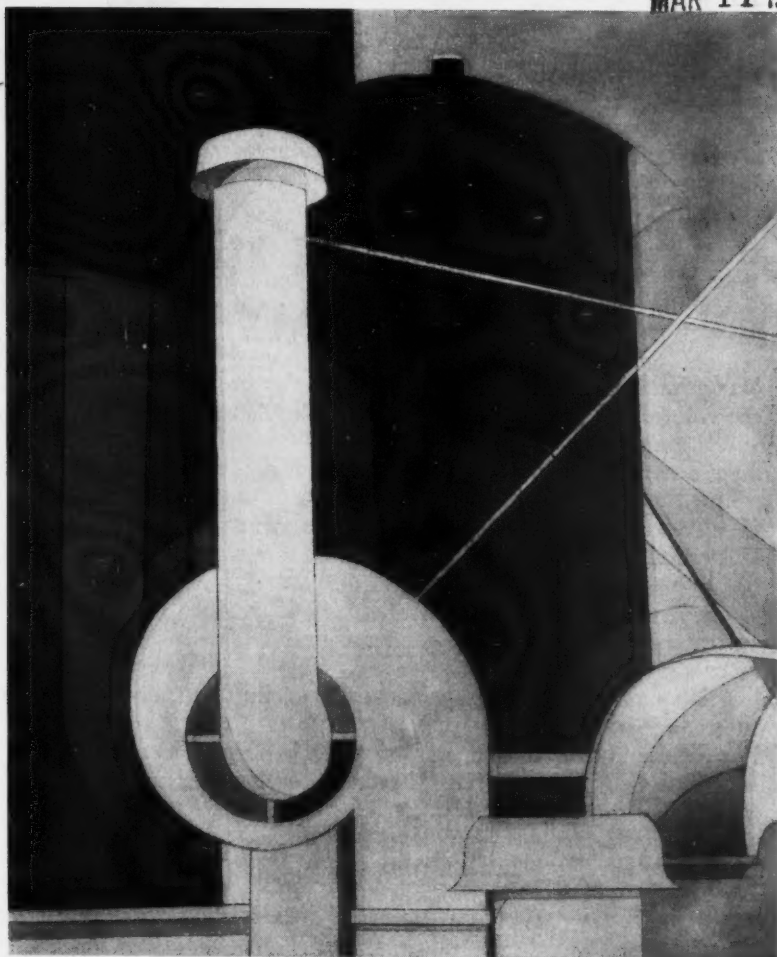


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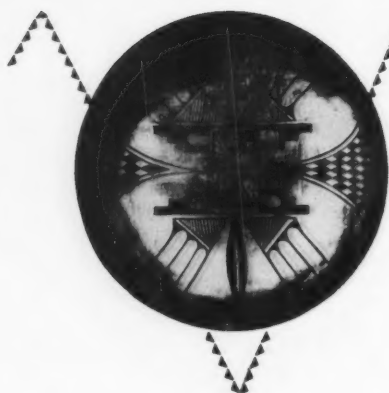
Magazine

MAR 11 1952



PAQUEBOT PARIS

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*Black pottery tray, produced at
the Pueblo of San Ildefonso,
by a people famous for
the delicacy and beauty
of their pottery.
On exhibit at
Carnegie
Museum.*

AN AMERICAN INDIAN ECONOMY

This exquisite piece of pottery, with its interesting geometric design, is typical of the culture achieved by one segment of the American Indians . . . those southwestern tribes that lived in pueblos.

In the northwest, tribes were largely nomadic, depending largely upon hunting and fishing for their livelihood. Many of the southern and southwestern tribes, however, congregated in permanent camps or pueblos. Here, various crafts and industries, as well as agriculture, were developed to a high degree.

A common denominator of all American Indian tribes, however, was their dependence on barter to obtain the necessities of life. Because there was no trade or commerce, no "money" was in use—barter being the means of exchanging goods or services, supplemented sometimes by the use of wampum or knotted ropes.

For their semi-primitive type of existence, barter was ideally suited to the Indian tribes. Only as the "whites" began to develop the land, and carry on a wide trade in commodities, did the need for currency become apparent. Thus—as throughout history—fiscal practices have developed as the economic needs of the country have become more complex.



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WHAT ARE YEARS?

... He
sees deep and is glad, who
accedes to mortality
and in his imprisonment, rises
upon himself as
the sea in a chasm, struggling to be
free and unable to be,
in its surrendering
finds its continuing.
So he who strongly feels,
behaves. The very bird,
grown taller as he sings, steels
his form straight up. Though he is captive,
his mighty singing
says, satisfaction is a lowly
thing, how pure a thing is joy.
This is mortality,
this is eternity.

—MARIANNE MOORE

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PAQUEBOT PARIS

The painting on the cover is one of eight by Charles Demuth (1883-1935) on display at Carnegie Institute through April 13, with seventy-one other oils and water colors from the Ferdinand Howald Collection at the Columbus Gallery of Fine Arts. (see page 79)

Paquebot Paris, an oil 25 by 20 inches, may well represent a large segment of the work of Demuth—architectural subjects done in semiabstract, their purity of composition bordering on the mathematical. He was equally known for his exquisite water colors of flowers. His water colors, with those of John Marin (also prominent in the Howald Collection and exhibited here) rank with the best America has produced. His painting includes still-life studies, circus and vaudeville scenes, and illustrations for books by Henry James and Zola.

Charles Demuth was born and died in Lancaster, Pennsylvania, where his mother's Victorian garden still blooms. His family were wealthy tobacco-growers, and he studied at the Pennsylvania Academy of Fine Arts, coming particularly under the influence of Thomas Anshutz. He spent two years in Paris in 1904 and again in 1912 and spent considerable time in New York City, where he was associated with Alfred Stieglitz. He had been lamed as a boy and contended with poor health all his life, but produced over nine hundred paintings.

Demuth once expressed his attitude toward his work thus: "With few exceptions, artists think of themselves too constantly as 'artists,' or men of genius—we should always be children and fools."

BEQUESTS—In making a will, money left to Carnegie Institute, Carnegie Institute of Technology, or Carnegie Library of Pittsburgh should be covered by the following phrase: I do hereby give and bequeath to (Carnegie Institute) or (Carnegie Institute of Technology) or (Carnegie Library of Pittsburgh) in the City of Pittsburgh, Pennsylvania..... Dollars

MEMORIALS—Carnegie Institute is prepared to receive contributions given by friends in memory of deceased persons in lieu of floral tribute, and to notify the deceased's family of such gift. The amount of the contribution will not be specified unless requested by the donor.

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Calendar for March

TUESDAY EVENING LECTURE SERIES

Music Hall, 8:15 o'clock
Admission only by
Carnegie Institute Society card

March 4—LAND OF THE ANCIENT MAYAS

Arthur C. Twomey will take his audience to the richly luxuriant jungles of Honduras, showing color moving pictures from last summer's field trip. Dr. Twomey is director of education and curator of birds at Carnegie Museum. His work in Honduras the past three summers has been sponsored by Matthew T. Mellon.

(The "walking talk" at 7:00 P.M. will go to the current Associated Artists exhibition.)

March 11—AUSTRIA

Karl Robinson has captured the fascination of Vienna, the Tyrol, and Salzburg on color film in a vivid study of a country whose contribution to culture has been incalculable.

(The "walking talk" will inspect Microfilms in the Library periodical room.)

March 18—COLUMBIA RIVER ADVENTURE

Julian Gromer will follow the adventurous course of the mighty Columbia River from its source high in the Canadian Rockies and down to the Pacific Ocean, showing color films with a musical background.

("Walking talk" to Botany Hall at 7:00 P.M.)

CARNEGIE FILM SERIES

Wednesday evenings, 8:15 o'clock, Lecture Hall
(Admission fee of 75c)

March 5—THE RIVER (Mississippi)

RHYTHM OF AFRICA
BROTHERHOOD OF MAN
LARCAUX: CRADLE OF MAN'S ART
BEGONE DULL CARE
LOONY TOM THE HAPPY LOVER

March 12—FARREBIQUE

GEOMETRY LESSON

March 19—CRIME AND PUNISHMENT

THE LOON'S NECKLACE

March 26—BERKELEY SQUARE

ALEXANDER CALDER: SCULPTURE AND CONSTRUCTION

SPRING ORGAN RECITALS

Marshall Bidwell will present musical programs on five Tuesday evenings in Music Hall, beginning March 25, after the lecture series ends. Well-known vocal and instrumental groups of the Pittsburgh area, who will be guests on these evenings, are listed on page 97. The Musicanters will sing on March 25. This spring series of recitals is open to the public.

Dr. Bidwell continues his regular Sunday afternoon recitals each week from 4:00 to 5:00 o'clock, under sponsorship of the Arbuckle-Jamison Foundation.

The short selections of poetry which appear each month on the preceding page are chosen by Ann Macpherson, head of the South Side Branch of Carnegie Library of Pittsburgh.

HOWALD COLLECTION

Demuth, Marin, Lawson, Hartley, Dickinson, Prendergast, Glackens, and Sheeler, as well as Degas, Matisse, Derain, Picasso, Braque, Gris, Léger, Villon, and Gleizes are among the artists whose work is on display at the Institute through April 13. The 79 paintings are lent by the Columbus Gallery of Fine Arts from the collection of Ferdinand Howald. (see page 79)

PHOTOGRAPHIC SALON

The thirty-ninth annual Pittsburgh Salon of Photographic Art will be exhibited at the Institute from March 14 to April 13, with a press preview on the 14th from 7:00 to 10:00 P.M. The Salon is sponsored by the Photographic Section of the Academy of Science and Art of Pittsburgh.

The Salon of Color Slides will be shown Sunday afternoons, March 16 and 23, in Lecture Hall at 2:30 o'clock, and is open to the public.

ROUAULT PRINTS

The "Misery and War" series of 59 etchings and aquatints by Georges Rouault presented to the Institute by Mr. and Mrs. Charles J. Rosenbloom are on display through April 13.

ASSOCIATED ARTISTS

The forty-second annual exhibition of the Associated Artists of Pittsburgh continues at the Institute through March 6, open each weekday from 2:00 to 10:00 P.M. This show by local artists includes 230 oils and a lesser number of water colors, drawings, sculpture, ceramics, and other handcraft including bookbinding, jewelry, metalwork, and weaving.

PITTSBURGH PORTRAIT

Two hundred years of civic development culminating in an industrial metropolis with a new outlook are shown in a pictorial exhibit sponsored by the Museum and the Allegheny Conference on Community Development, with the co-operation of the Pittsburgh Regional Planning Association and the Pittsburgh Photographic Library at the University of Pittsburgh.

STORY HOUR

Story-telling for boys and girls of school age continues each Saturday at 2:00 P.M., in the Boys and Girls Room at the Library.

Pre-school story hour is on Wednesday, March 5, and Wednesday, March 19, at 10:30 A.M. in Boys and Girls Room. There will be talks for the mothers at the same time, by Library staff members.

SATURDAY AFTERNOON MOVIES

Free color-sound moving pictures for youngsters of school age are shown each Saturday at 2:30 P.M., in Lecture Hall. Travel and wildlife are featured.



WINDOWS . . .

SYMBOLS OF CULTURE

For many, many centuries man existed in structures without windows.

We ask ourselves why? The answer is simple—there was no glass for windows.

It was not until about the 12th Century that glass was used in windows to any appreciable extent. Glass was a rare and costly material. In many countries today, window glass is still a luxury which only the rich can afford.

During the 18th Century windows came into their own. The large bay window was widely used in England. This provided a room with a view and reflected the high level of culture of the 18th century.

The glass window became the subject of literary and historical writers. Some called it a symbol of cultural development. They pointed out that the glass window made it possible to open mankind's dwellings and minds to the wonders and beauty of nature.

Just as the glass window signifies cultural progress so does the name Pittsburgh Plate Glass Company signify superior quality in glass for home glazing.



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HE CHOSE WITH CONVICTION

The Howald Collection of Paintings at the Institute February 28—April 13

LEE H. B. MALONE

THE extraordinary fact that always strikes admirers of the Ferdinand Howald Collection is that the passing of time has given such wide endorsement to his personal artistic judgment.

It is all too rare an experience for any of us to single out even one or two of our contemporary artists with the conviction that they will continue to have meaning to the future! And for this reason, it is little short of astounding to see the confidence with which Howald collected. Not only did he choose over thirty artists whose names have since waxed great in our present perspective, but he bought such numbers of paintings by each of them—twenty-eight by Charles Demuth, sixteen by Marsden Hartley, seventeen Preston Dickinsons, fourteen Prendergasts. The list could be protracted at length, but most famous of all are the thirty water colors by John Marin which he acquired almost systematically on the average of two each year.

Now that we can look back more objectively, we begin to appreciate what an achievement this was. Among the great generation of collectors in the first quarter of the century, Ferdinand Howald was unique in concentrating his interest on the young American artists of his own time. He stands in sharp contrast, even, to the other pioneer collectors of the new art he loved. While these others generally began with the pictures of Matisse or Picasso after the Armory Show in 1913, he had already started to buy his American contemporaries, and, as Thomas Craven remarks, he was regarded in the World War I years as the outstanding American patron of advanced painting. It was only later, after 1924, and in a curious reversal of the



STILL LIFE WITH YELLOW-GREEN CHAIR

By PRESTON DICKINSON

usual order, that he began to turn his eyes to the modern painting of Paris.

The real significance of this lonely position can only now be roughly surmised. It was, no doubt, of considerable importance in encouraging the work of those artists he liked. For instance, he acquired the first two paintings offered for sale by Peter Blume. And Kuniyoshi, another painter whose earliest works are also in the Howald Collection, once remarked, "I feel for him as I would toward my own father. He bought my pictures when I was a boy." But it is difficult to estimate how wide an influence his collecting had on the new school as a whole. While the artists he believed in were certainly strengthened in their own ways by his repeated patronage, his reserved and even diffident character did not permit him to be a public champion for his own enthusiasms. For Howald, his collection was quite a personal thing. It was an essential way of expressing and refining in his mind the sophisticated feelings and tastes which he could not readily find expressed elsewhere in the life about him. It is certain that the collection was the most important thing in his life.

He had come as a boy to central Ohio from Wangen in Switzerland, where he was born in 1856. After graduating from Ohio State University in the College of Engineering, he was largely responsible for the development of the coal resources of West Virginia until two mine disasters and the consequent human tragedies were so shocking to him that he withdrew his support. He then removed to Columbus and New York, where he was notably successful in various investments. He spent the balance of his life between these two cities until his death in the spring of 1934.

He had begun collecting in 1904 and at first his principal interests were early Italian paintings and Near Eastern ceramics. It was in this period that he acquired a superlative group of Kubatchi or Rhodian Plates. Then, shortly before World War I, and partly as a result of his friendship with John Daniel, of the Daniel Gallery in New York, he became acquainted with those American painters who were to become his dominant interests. Among these his especial favorites were Marin, Demuth, Preston Dickinson, and Maurice Prendergast, and, knowing these men personally, he bought extensive works by each of them with the definite intention of spurring their continued efforts. However, it must not be assumed from this that he bought in any casual or simply methodical way. He liked to live with a picture for a long time "to get the feel of it," as he would say, before deciding on it. Undoubtedly his own solitary and intellectual approach to life was most clearly reflected by these four artists. It is said that he liked to keep Marin's paintings particularly in his own rooms, and often these would be placed behind the furniture against the walls, only to be taken out when he wanted to look at them with care.

Another group of artists whose work Howald collected almost as extensively



FROM THE OCEAN BY JOHN MARIN

were more concerned with a poetic interpretation of nature and urban life—Lawson, Kent, Glackens, Sheeler, and Hartley. Even from these artists he very rarely accepted compositions with figures, preferring for the most part the cool remoteness of landscapes and flower studies and still life. It was above all the intellectual order and arrangement of a painting that appealed to him, and for this reason he had no difficulty in responding to the values of abstract design. But, there are very few paintings in the collection that verge on the completely abstract. He preferred a middle way in which the effects of nature were reinterpreted and refined in terms of a universal underlying design. In this regard he preferred nature in its more objective aspects without the troubling presence of man. In short, his taste was that of an engineer—precise, logical, and orderly, but with an intimate friendly quality.

About 1923 he became interested in the French masters as a corollary to the American movement that he had already so attentively followed. With his usual perspicacity he bought the work of Degas, Matisse, Derain, Picasso, Braque, Gris, Léger, Jacques Villon, and Gleizes. The cubist pictures were once considered by Gertrude Stein to be the most complete public display in the world, and in view

of the debt of cubism to Cézanne it is only curious that he waited so long to find this master. This lack can only be explained on the basis of his not having found just the one he wanted, because in his very generous will it was the first of his few requests that the work of Cézanne should be included in his collection.

There is a certain historic irony in the fact that this collection was known only to an intimate group of artists and friends during the years when it might have been most influential. The first significant public knowledge of it was given in an article by Forbes Watson in *The Arts* in 1924, but it did not gain wide recognition until after the dedication of the new building of the Columbus Gallery in January 1931. By that time it was almost too late to exert the formative influence on American art that it might have had in the earlier years. Nevertheless, the part of the Howald Collection in the Columbus Gallery stood at 248 pictures by 67 artists, and ever since it has continued to prove the sure judgment of the man who formed it. The PITTSBURGH INTERNATIONAL of 1933 included eighteen of the artists represented in the Howald Collection. Indeed, there are only about five of the artists he admired who have been overlooked in the passing years, and we may well ask ourselves why we have neglected these. Look at Jacques Mauny, for example! What an unusual and fine painter he was.

Since the recent war, many of the Howald paintings have been requested for exhibitions in leading museums of the United States and as far away as London, Amsterdam, Paris, Vienna, and Venice. Now, for the first time, the Collection is being given important recognition as a work of art in itself. The significant portion of it being exhibited in Pittsburgh gives a very complete idea of its whole scope and of, let's say, its personality. As Forbes Watson wrote in 1924: "It has a friendly person-



BIRCH WOODS BY ERNEST LAWSON

ality . . . because it was assembled with enjoyment. It receives the visitor courteously and modestly, without insisting on its importance. It is not only largely native but adventurous and personal."

Such an exhibition is not only a tribute to Ferdinand Howald, it is also a tribute in a way to all private collectors who help young and unknown artists to realize their dreams. "This is a young country," Howald used to say, "and it needs encouragement." It is now only to be hoped that his faith in the future will be as readily and easily understood as it once was by one of the city police who was on duty as guard in the Columbus Gallery. When a newspaper reporter asked him what he thought of these paintings, the straightforward reply was: "When I first saw 'em, I couldn't make head nor tail of it all, but the longer I look, the better I like 'em."

Mr. Malone has been director of the Columbus Gallery of Fine Arts since his appointment in May 1946, following his release from the Navy. Before World War II he headed the Clearwater Museum in Florida and from 1937-39 was assistant to Theodore Sizer of the Yale Art Gallery. In 1942 he collaborated in arranging the exhibit, *LIFE IN THE U.S.A.*, which was shown in Mexico under auspices of the State Department.



DR. EISAMAN WITH A LAND IGUANA

OPERATION "CLINKERS"

JOSIAH R. EISAMAN

Dr. Eisaman continues telling of his voyage to the Galápagos Islands, or "Ash Heap of the Pacific," last summer as one of the crew of seven aboard the "Arthur Rogers," a seven-foot British ketch, sailing from Balboa and landing on San Cristóbal.

THE physiography of San Cristóbal Island has changed little since Charles Darwin made his first landfall there one hundred and sixteen years ago. Watered by the prevailing southwest winds, it is the most fertile of the Galápagos Islands. Here we find Wreck Bay, port of entry, lying amidst jagged lava rocks and two small sand beaches. Above are two towering volcanic peaks and the more lush vegetation moistened by the continuous *garua*.

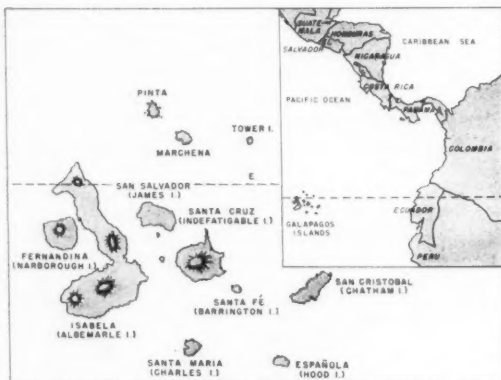
Darwin found tortoise, iguanas, and finches in abundance. Now only the finches survive. In 1835 the secondary invaders—hogs, dogs, cats, rats, and goats from sailing vessels—which always follow infestation by man, had not upset the biological balance of the island.

The wealth of natural-history observations accumulated by Darwin during the extended voyage of the *Beagle* constituted the factual basis for the momentous doctrine of evolution, but as he himself recorded in his diary, it was the observations made on the Galápagos that first set him to thinking about the transmutation of species. It is a matter of record also that it was a Mr. Lawson, the then vice-governor of the islands, who pointed out to Darwin that the tortoises from the different islands were recognizably

different. It is interesting to speculate upon the importance of this casual remark in the development of a theory that revolutionized biological thinking.

Wreck Bay is the seat of government of the Galápagos Islands. We tied our dinghy to the eighty-year-old wharf made of worm-resisting Matasana wood, and felt our way to the village amidst many fish boats and diving booby birds. We were greeted by the imposing bust of Charles Darwin—not as a boy of twenty-five, but as a man of sixty-five. This was erected in 1935 by the American Museum of Natural History.

Later we found the government con-



GALÁPAGOS ISLANDS

sisted of El Comandante, his assistants, an unreliable radio station, a two-bed naval hospital with one pharmacist as staff, and a squad of tawdry Ecuadorians. About the beach were a handful of wood and corrugated iron huts, a church, and a small trading post. Water, fresh but not potable, was piped from a high lagoon.

San Cristóbal was first populated by political prisoners. They were sent to this lugubrious spot to gather the mosslike orchilla found on most of the Galápagos vegetation. This so-called dyer's moss, before the discovery of aniline dyes, was valued at six dollars a ton. Señor Manuel J. Cobos had been given official sanction to exploit these hapless beings. In addition to the orchilla, he raised sugar cane with unpaid prison labor. Cobos ruled tyrannically; the prisoners were treated as cattle. His murderous cruelty was unlimited. Some prisoners were shot, while others were left to die of thirst on a desert island. But in a careless moment, Señor Cobos was "macheted" to pieces at the government headquarters in Progreso.

We were impatient to visit Progreso, even though its title is a misnomer. El Comandante had promised us ponies, but that was the first of our disappointments. Since they failed to materialize, we made the five-mile trip by foot over the washed-out lava rock road, the stones of which have been smoothed by many animals and humans.

The desert changed as we climbed. The barren lava was soon covered by agave, wild cotton, guava trees, wild plum, and then, miraculously, orange trees. Slippery red clay covered the rock. Beautiful little finches of varied hues and many lizards and gigantic centipedes were found. In Progreso there was mud and stagnant water. Pigs and chickens shared the few thatched huts with the natives. Señor Cobos' mansion has been destroyed, but his daughter-in-law Karin welcomed us to her simple home. Karin and her sister are the only individuals who remain of the highly exploited and disillusioned Norwegian immigration of twenty-five years ago. They now own a large coffee plantation of 125 thousand trees.

El Jonco lagoon, from the base of which Wreck Bay receives its abundant supply of water, is far above but not too far to



THE BUST OF CHARLES DARWIN AT WRECK BAY

explore. This was done with the help of small Ecuadorian ponies over another eight miles. Trees are more stunted, but pasturage for the wild horses, cattle, and goats is abundant. Everywhere there is evidence of rooting wild hogs. A group of fledgling owls and a flock of wild ducks showed no fear at our approach.

Dismounting, we climbed high into the mists, and from the steep edge of the volcanic cone we saw the mile-wide El Jonco lagoon far below. A sudden tattoo of many hoofs alerted us. A dozen or more small wild horses broke through the cloud and scampered past.

The trek back to Wreck Bay in the moonlight, accompanied by Karin, was grim for us saddle-sore mariners. Our feet bumped along the rocks, but the little shoeless ponies never missed a beat.

We remember this anchorage as the last port of ample water and baths. The skipper seemed to be infected with the Spanish ailment, *mañana*. We had trouble getting the ship watered, but we were off to Santa Maria Island as soon as the indispensable British ritual of breakfast had been completed.

Of all the literature in every tongue pertaining to the Galápagos, the greater part has featured Santa Maria (Floreana) Island. It was the first of the islands to be populated—by political prisoners. Its history is steeped in intrigue, mystery, and crime.

Beginning in 1929, the press told of two German escapists going to Santa Maria. These were Dr. Friedrich Ritter and his companion, Doré Strauch. They founded their Eden in "Friedo"—a combination of their names. Ritter, a pseudo philosopher, spent time with his writings; Doré, according to her later confessions, was the drudge. By extreme labor they erected a hut and became economically independent, but Doré was resentful of Ritter's neglect and preoccupation.

A few years later another German group arrived from Cologne: Heinz Wittmer, his wife Margaret, and their son Harry appeared on the black lava sand beach and established themselves at the best spring, higher on the island. For the first three months after their arrival their home was a shallow lava cave. The Wittmers and Ritters lived amicably though jealously. But within a few months of the Wittmer landing the Baroness Eloisa Bosquet von Wagner, of questionable nobility, arrived with two male companions, Lorenz and Phillipson, to assume sovereignty of the Galápagos.

The island was too small, water was too scant, and their ambitions were too different to permit peaceful relations among these immigrants. The Baroness was arrogant and cruel, deposing and persecuting her alternate lovers. It is said that one of her last psychopathic acts was to bathe in the one remaining barrel of very precious water.

The abrupt disappearance of the Baroness and Phillipson has never been explained. Their bodies may be lodged in some deep



THE SEA LIONS WERE FASCINATED BY THE VISITORS

volcanic crevice. Death continued to stalk Santa Maria. The mummified bodies of Lorenz and a Norwegian fisherman, Nuggerood, soon were found on lonely desert Marchena Island. They must have been marooned and died of thirst. In a few days Dr. Ritter was dead of poison or a stroke and the "grief-stricken" Doré returned to Germany. In her book, *Satan Came to Eden*, Doré openly accused the Wittmers of the murders, but those who are familiar with the episodes are frank to say that the Baroness, Phillipson, and Lorenz all died as the result of a lover's quarrel. Heinz Wittmer and his family are now in sole possession of this gruesome island.

In the gathering dusk we sailed into Post Office Bay, the approach to Santa Maria, but considered it wiser to "heave to" and await the full moon before making an anchorage. Early morning of July 21 found us at the so-called post office, mailing our messages, which were received in the States four months later. This upturned cask was the first bit of construction on the islands. Here many mariners and whalers on voyages lasting for years left messages for home. These were taken aboard by the first passing ship, marked "ship's mail," and sent to the main Washington post office free of charge.

We started a long hot trek in quest of the Wittmers. Each of us thought that he knew the trail, but after miles of rough lava and thorn bushes the "Highway of Death," strewn with the skeletal remains



AT THE OFFICIAL POST OFFICE ON SANTA MARIA ISLAND

of drought-stricken cattle and goats, proved to be a burro trail. After a conference and refreshment with chocolate and wild lemons we continued our search, always going higher into the moist dense guava thickets.

None too soon we came to the Wittmer clearing. The three children, Harry, Rolf, and Ingeborg, were busy packing burros. Mrs. Wittmer was boiling down sugar cane. We were treated to water—actually—and oranges and cordially invited to return with them to their new home on Black Beach. Acceptance was instantaneous. The evening meal, prepared by fourteen-year-old Ingeborg, was bounteous, and even though bedded on rawhide couches, we forgot the Baroness, Phillipson, Lorenz, and Ritter.

It was but a twelve-hour sail from Santa Maria to the little island of Santa Fé. Sustenance en route was afforded by a stew made from a goat killed on Santa Maria. The wind was good and we literally blew into a small landlocked harbor, to the consternation of hundreds of sea lions (*Oraria jubata*) basking in the late afternoon sun. Sea lions, sea turtles, penguins, and boobies were diving on every side.

We waited until morning and set out in the dinghy, little suspecting that we were soon to be objects of curiosity for many sea lions. They splashed from the rocks at our approach and kept pace with the boat. Two large herds of bulls, cows, and pups that were chased from the beaches

determinedly returned to shore. They followed us as we walked along the shore and chewed at the painter of the anchored dinghy. Bellicose old bull lions evidenced their resentment by roars and sharp dives at our legs.

Hawks, mocking birds, owls, and small herons were fearless. The colorful Sally Lightfoot crabs (*Graspus graspus graspus*) swarmed over the black rocks.

Evidently here there had been little destruction of life for years.

Little uninhabited Santa Fé Island, only five miles in diameter, waterless and overrun by goats, provided us with excellent hunting and collecting.

The land iguana, a most interesting creature, we found in abundance. This sulphur-colored three- to four-foot saurian was usually found among rock piles and cactus (*Opuntia*) trees. At one time iguana burrows were so numerous that Darwin could find little space to pitch his tent.

Strictly herbivorous, the lizards had stripped the cactus of all lower branches and munched the spines indifferently. They observed our approach superciliously, then rushed to their shallow rocky burrows. To dislodge one of these creatures from his den, after he had dug in and inflated his belly, was impossible. This fellow is vicious and can cause severe lacerations even through clothing. When annoyed, he faces his tormentor with mouth agape, crest erect, and a peculiar vertical nod of the head. Six of these were taken aboard.

Although iguana is an island delicacy, our recipe must have been at fault, for we dined on it but once.

When we sailed from Santa Fé, the ice-box and after cabin had become veritable serpentaria. Snake bags wriggled in the corners, and periodic thumps and scratchings were emitted from beneath the bunks. El Commandante gave us permission to

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DETECTIVE STORY FOR TODAY

A review of "Crime in America" by Estes Kefauver

SOLOMON B. FREEHOF



THE great tragic American poet and story writer, Edgar Allan Poe, in 1843 wrote a short story, *The Murder in the Rue Morgue*, which became the model of the detective story all over the world. In his day it was rather a unique and astonishing type of writing. A little later Wilkie Collins, an Englishman, wrote *The Moonstone*, a crime or detective novel. A little later a Frenchman, Emile Gaboriau, then Anna Catherine Green, wrote detective novels. But then suddenly in the last twenty-five years, tens of thousands of such books were written.

Those of us who are addicted to detective stories know that it now makes little difference who the author is. As a year goes by we forget even the titles of all the detective books we have read. These books are not really literature. They are a sort of opiate: there is a certain mental pain, certain social fears which these books serve to assuage. All of us to varying degrees have a fear of the untamed violence below the surface in every society, the brutality, the murder, the robbery, the hideous crimes against the human person. In our heart is worry that the policemen we pay are insufficient in number to hold down this violence, and that at any time the volcano may burst. So we make use of literature, an opiate literature, which reassures us and says to us in every detective story: "Yes, there is an underworld. There is crime; and sometimes too there are corrupted police. But do not fear, there is a fine young state's attorney or a brave private detective who by his personal courage will conquer the evil." And indeed the evil is always conquered by the time the book is ended.

The very multiplicity of these consoling books has so steeped us in easy reassurance that it is difficult to arouse us to face reality. Rudolph Halley, who was elected recently to a high office in New York City,

said, "It took us one year and a quarter of a million dollars to persuade the American people that crime is a reality and not fiction." Part of that great effort toward reality is described in a current best seller, *Crime in America*, by Estes Kefauver.

Senator Kefauver is blessed with a deeply reassuring presence on television: here is a man manifestly earnest and sincere. His chief function in life during the past year was to convince the American people that crime is not fiction!

The author writes well because he evidently speaks well. His story is told clearly. He begins with a chapter dedicated to the origin of the Senate Crime Commission. He speaks of the resolution that he introduced in the Senate. I do not know whether he was unsophisticated, or acted innocently, when he introduced that resolution. At all events, he might have known it would be political dynamite because any Senate committee, looking into a disgraceful and nationwide situation that everybody already knows about, can have tremendous political influence and be a determining factor in a coming election. There are some corrupted cities dominated by Republicans, and some dominated by Democrats.

When the Crime Commission was finally appointed it faced many difficulties. Its police officer was the Senate sergeant-at-arms, who is really a parliamentary officer with very little actual power to arrest and to summon. Further, the right of a witness to refuse to testify on the ground that he might be incriminated was sustained very early in the committee's career and hampered the committee throughout the year of its work. But in spite of these difficulties the committee worked for an entire year, questioned eight hundred witnesses or so, traveled from coast to coast and crisscrossed the country, north and south. It worked in big cities and in small cities, until it had accumulated a mountain of testimony and had come to definite conclusions.

Senator Kefauver's first conclusion is that there are two main axes of crime in America. One starts from New York and the other from Chicago. The New York group is in close connection with the old Mafia, the international crime organization; and the Chicago group is the remnant of the Capone gang. The first part of the book deals with the Mafia: he tells the story of a young lad, Caramazzo, in Kansas City, who was beaten to death by a man named Cantazara in the midst of a crowd. The assailant was almost mobbed for beating this boy to death, but he was never convicted because one by one all of those seventy-five to one hundred witnesses were terrorized. Even the detective was assassinated.

Such terrorizing of witnesses, says Kefauver, is typical of the Mafia. The Mafia, now an international organization, originated among the Sicilian peasants not a century ago as a protective organization, and later became a racketeering organization that enforced its decisions by blood. Nobody who was ever a member of it can ever cease to be a member. Nobody of course can even ever speak of it to the authorities. For that the punishment is always death. Sometimes the punishment is a preliminary one. A member of the family of the person involved is killed as a warning. So it was clear that the father, Caramazzo, was a member of the Mafia. He evidently was considered unreliable, so his boy was beaten to death as a warning to him. Nobody dared testify against the murderer, and the father, who later himself testified against the Mafia, was killed.

The committee has come to the conclusion that although witness after witness either laughed or nervously giggled when the Mafia was mentioned, sufficient evidence has been accumulated to prove that this organization, centering chiefly in New York, dominates the underworld in certain definite fields; namely, in such fields that require nationwide or international connections. First of all in labor racketeering: certain labor unions have tragically been infiltrated and taken over by thugs from the underworld, mostly Mafia thugs.

This is from one of the reviews of current best sellers given by Dr. Freehof in the autumn at the Rodef Shalom Temple, where he is rabbi.

The narcotic trade, which is certainly international and requires control of harbors and longshoremen and ships, is all under the Mafia. Who the American head of the Mafia is no one can know. There is a man in New York whom the committee suspects and of whom Senator Kefauver writes in this book. He is to all outward appearances a respectable businessman, an importer of olive oil; but he is really the head of the Mafia in this country.

The international head of the Mafia is the infamous Lucky Luciano, who, before he had been arrested and sent to prison by the young district attorney, Thomas Dewey, lived in glory with unlimited money, always followed by a bodyguard, had the best suites in the best hotels, and so on. Then he was sent to prison and afterward was mysteriously pardoned by the same man who sent him to prison. There is a persistent belief that this was done at the request of the United States government, since we were about to invade Italy, and Luciano, with his Mafia influence, could help us greatly with the Italian underworld to disrupt the German war effort. At all events, that was the tale Senator Kefauver mentions. But he does not confirm it at all.

At present, then, Luciano lives in state in Italy and is said to be in control of almost the entire narcotic business that is corrupting American youth. This much for the New York Mafia axis.

As for the Chicago group, the committee spent a great deal of time in Illinois and created a good deal of a stir too. There they found their first blatant evidence of the underworld's reaching into legitimate business. During prohibition, underworld syndicates had made enormous sums of money, most of which, of course, escaped income tax because it was not declared except for a small amount, just enough, as it were, to keep Uncle Sam calm. These criminals after prohibition, accustomed now to vast incomes, having these great organizations to maintain, invaded legitimate business. Honest businessmen, accustomed to normal competition, suddenly needed to compete with underworld characters who used violence as a means of business advantage. So, for example, one man in the Capone gang became the greatest wholesaler of beer and liquor in

Chicago, and honorable firms that had been in business for fifty and seventy-five years, were forced to the wall.

More and more business fields such as hotels, truck transportation, and so on, are being infiltrated by the underworld in its quest for legitimate income. That is not, of course, the worst side of the whole situation. The corruption of police was so great that when the committee started to investigate the sudden wealth of certain Chicago police captains, scores of captains resigned, a phenomenon which we have seen repeated recently in New York.

When an attempt was made by Adlai Stevenson, the governor of Illinois, to get the legislature to pass a certain bill that would curb crime, a group of legislators, Democratic and Republican, known frankly as the Capone bloc, fought that legislation and, by political deals, by bribery and by threats of violence, had it defeated. Thus the underworld's political influence reaches in some states even as far as the state legislature and has a bloc supporting its interests.

From New York and Chicago the committee went to many other cities and the rest of the story is pathetically monotonous: chiefs of police and sheriffs in the pay of the underworld, narcotics and gang-murders prevalent everywhere.

The most important underworld influence in America, next to the Mafia, is, of course, the gambling interests. The vast nationwide gambling would be impossible were it not for the fact that an underworld organization, the Continental Press Service, leases twenty-three thousand miles of telegraph circuit from the Western Union in order to give quick racing information to the gamblers. The bookmaking business with its multimillion-dollar income is centered in this Continental News Service.

Toward the end of the book Senator Kefauver suggests what must be done, i.e., what the committee recommends. With regard to the Mafia, the New York axis, and the narcotics, he suggests that the emigration laws be corrected where they need correction so that undesirable aliens may be quickly deported and that naturalization may be more quickly cancelled where these alien criminals have become naturalized.

As for the Continental News Service,

the veins and sinews of the nationwide gambling, he suggests that the use of the telegraph wires to transmit gambling information be prohibited. But he says he knows that the Associated Press will oppose him since such a law would dam up all the racing news and might hamper the gathering of all types of sporting news. This involves the problem of freedom of the press. How can we control the underworld gambling information without hampering the freedom of the press? This will need to be worked out; the committee clearly has not arrived at a definite demarcation between freedom of the press and control of the underworld.

Thus did Senator Kefauver and his committee go from city to city accumulating this vast story of the underworld. The last week or so of the hearings of the committee suddenly were put on television and so created a nationwide excitement. Thirty million people were estimated to have watched the whole trial day after day. It ended in a high pitch of excitement. The American people participated in a Senate hearing as it never had participated before, and the value of that participation is the theme with which the Senator closes his book.

It is rather regretful that this important book, this earnest, valuable book, is dull, which is strange, for it is well written and the material is important and even at times romantic. Yet the book is dull. This is not Senator Kefauver's fault at all. It is our fault. We have already read too many detective stories and could tell him everything that is in the book without even reading it. We have been made so dull and world-weary by our literary opiate that this important report is only an old story to our jaded minds. Perhaps that is the source of great danger and perhaps too that explains the vast excitement over the television. To many viewers it was just a new and a bigger detective story.

Of course, the American people is not always light-minded. It is capable of being aroused. That has been demonstrated often in the past. There have been certain great occasions when the whole American people has been aroused to grand sacrifice and magnificent achievement. What sort of occasions are they which rouse the American people to a crusade? Well, first of all,

there are patriotic occasions, when we are concerned with the safety of our country. If this crime investigation could succeed in persuading the American people that America is in actual danger, then we might quickly have a patriotic crusade as we do in wartime. But we Americans are not easily persuaded that America can be readily hurt either by graft or by criminality. We are too confident of our strength.

There is also another type of crusade that can stir the American people, the one typified by *Uncle Tom's Cabin*. When the pity of the nation is aroused for individual sufferers, that can create a storm of indignation all over the country. If a crusade of patriotism cannot move us in this matter, then a crusade of pity is possible. There seems to be considerable possibility of bringing before the American people in some moving way the story of the young high-school boys and girls corrupted by the peddlers of narcotics.

There is still another type of crusade that is often effective in America. Long before attempts were made on a nationwide basis, by law, to outlaw the liquor traffic, it was preceded by a movement to persuade people to take personal pledges against alcohol. This taking of personal pledges involves an element of American character that always must be calculated upon and it is as influential as patriotism and a sense of pity. It is the sense of personal character and achievement. We are a great people for self-improvement and self ennoblement in almost every field.

There is a side to this crime business which has to do chiefly with personal character or our personal responsibility. Where does the underworld get the money with which to corrupt our government? Whence these millions? From us! Every penny that is bet on a horse race, every penny that goes into a numbers game enriches the destroyers of American decency. And that is aside from the question of whether gambling is morally right or wrong. Today the whole gambling business is in the hands of the underworld, and every time a decent person gambles with the smallest amount of money, he gives power to the corruptors of our country.

The time must come when a man must say: "Not any more, never again, no penny of mine is going to get into the

hands of the corrupters of America." Until such a mood becomes a personal crusade we will not get very far.

Senator Kefauver has written a clear, good, earnest book. But he is talking to a people that has been narcotized by reassuring literature for fifty years. His task is perhaps greater than he realizes. His struggle is not only with the Mafia, nor the Capone gang and the wire syndicates, but also with us, to arouse and to awaken. The time may come, and it may be near, when the American people, moved by duty to our country, touched by pity for many young victims, and above all stirred by personal moral responsibility, may yet face and control crime in America.

IN GERMANY

OTTMAR F. VON FUEHRER, chief staff artist at Carnegie Museum, was invited to present a paper on dioramas in natural history museums of the United States at a joint conference of the Association of Zoological Preparators and Dermoplasts of Germany and the German National Association of Natural History Museums held at Bonn am Rhein last September. Although unable to attend in person, he gave an illustrated lecture by proxy through the co-operation of Karl Mielke, reported as follows in the minutes of the conference.

"At the meetings of the technical section Karl Mielke of the Bonn Museum gave a talk on "Museum Exhibition and Preparation, Its Function and Development," incorporating a paper on "The Diorama in the Natural History Museum of the U. S. A." by Ottmar F. von Fuehrer, of Carnegie Museum, Pittsburgh.

"These two lectures gave an excellent insight into the development of Museum exhibition work in Germany and in the United States. With numerous photographic slides made by his German colleagues Martin, Kerz, and TerMeer, Mr. Mielke illustrated the historical development of Museum exhibition work in Germany. Special interest was shown in the slides made by Mr. von Fuehrer at Carnegie Museum in Pittsburgh and at the American Museum of Natural History in New York. Mr. von Fuehrer's slides of

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ASSORTED ARTISTS OF PITTSBURGH

RAYMOND SIMBOLI



CREATIVE art, today as in the past, has always been subject of public controversy. The forty-second annual Associated Artists of Pittsburgh show is on view in the galleries of Carnegie Institute through March 6. This exhibition of Pittsburgh artistic talent will share the praise and condemnation of both artist and the public.

The show, our largest, has quality, variety, and interest. The trend shows an increasing move toward abstract art heading in the direction of what might be called "American Expressionism." Reflecting the influence of contemporary living, the artist cannot be denied his freedom, so each year the academic school grows more and more academic, while the moderns become more and more uninhibited, providing excitement and freshness. There is need for both kinds of art, and what is popular today offers no criteria lest it, too, become repetitive and academic in time. Both schools are capable of turn-

ing out art or just daubs. May the best of both schools survive and derive inspiration from each other. May the coming season promise even more, marking another milestone in the artistic history of our great city.

The jury of selection and awards, elected by the membership, was composed of William Milliken, director of the Cleveland Museum of Art, and painters Ernest Fiene and Umberto Romano, for the pictorial selection; Mary Callery for sculpture and Don Schreckengost for crafts. The Association is grateful to the jury for its tremendous task. Approximately a thousand pieces were submitted and 532 were selected for the exhibit, 27 of these receiving awards totaling \$1,850.

The Carnegie Institute Prize given by the fine arts committee of the Institute for the best group of two oils was awarded to Roger Anliker, a Carnegie Tech professor. *Esther Ivory*, executed in casein and wax, is both elegant and sober. *Possessions*, executed in encaustic, is peaceful and soft in color, showing a girl in a casket with



5524 FAIR OAKS BY EMILY SIGAL



POSSESSIONS BY ROGER ANLIKER

scattered earthly possessions. This award is the largest amount offered, and the recipient is not eligible to compete for it again. It seems that this rule might better be changed, possibly to allow a recipient again to enter competition, say, after ten years.

To Charles LeClair, head of the art department at the Pennsylvania College for Women, went the Association's First Prize for the second successive year for his *Shadows in Soho*, a very effective arrangement of color, line, form, and texture, woven into a plastic abstract.

To a young newcomer, Tom Rowlands, went the Association's Second Prize for *Poster to a Yellow Man*, an abstract with all the pyrotechnics from art. Not content with one prize, he was awarded the Graphic and Drawing Prize for his *Young Mother*.

Another newcomer, Wayne McBeth, wins the Association's Third Prize for his first entry with the Associated Artists, a well-balanced abstract en-

titled *Mood*, with forms in vivid colors.

The H. J. Grinsfelder Prize for the most distinguished oil painting went to Balcomb Greene, another Carnegie Tech professor nationally known, for his *Abstraction*. It is a characteristic Greene, with a dynamic impact of explosive cloud forms.

The Henry Posner Prize went to Emily Sigal for the best Pittsburgh scene, *5524 Fair Oaks*, painted

from her window, a wintery canvas with a feel of breadth and freshness.

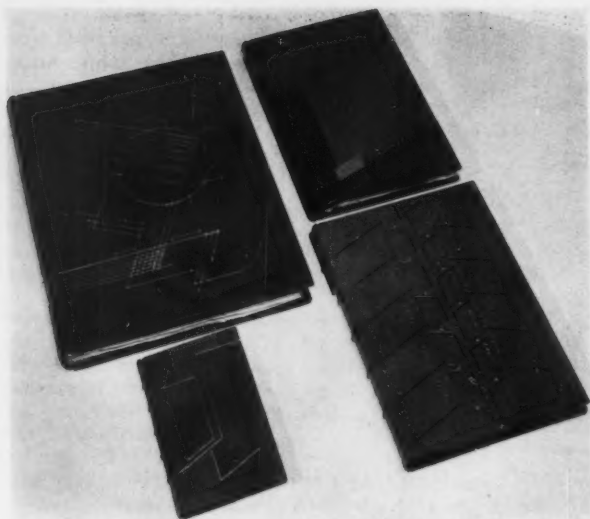
The Christian J. Walter Memorial Prize for the best painting of a local subject went to Matthew H. Mawhinney for his *Early Service*, a serene and honest painting with sparse early-morning churchgoers.

To Arthur Rudolf went the Garden Club of Allegheny County Prize for the best floral painting, *Melancholy*, a dreamy painting of vast space with drooping flowers.

The Anonymous Prize for the best realistic landscape went to Harry W. Scheuch



EVENING FOG BY THERESA L. CHIANELLI



BOOKBINDING BY THOMAS W. PATTERSON

for his *Rebecca Street No. 1*, an unmistakingly wet day, strong in mood, enhanced by the dwarfed people appearing in most of his canvases.

The Somerset Trust Company Prize for the best oil or water-color painting of a landscape done in Somerset County went to Joseph Fitzpatrick for his *Somerset Hamlet*, a scarecrow in a Somerset surrounding, abstractly treated, with greens predominating. Fitzpatrick, past president of the Association, bears watching.

For her first entry to these exhibitions, Teresa L. Chianelli was the winner of the Association's First Water Color Prize for her *Evening Fog*, a handsome, decorative treatment of the subject.

Still another newcomer is Elizabeth Asche, winner of the Association's Second Water Color Prize for her *Inferno Incarcerate*, a spontaneous, colorful abstract.

The Charles J. Rosenbloom Prize for the best water-color painting went to Marie Tuicillo Kelly for *Happy Hunting Ground*, a fantasy of primitive world marked with an original decorative appeal.

There are many other worthy paintings, but space does not permit mentioning them.

Anita Freund Morganstern, sculptor, chairman of public relations for the Associated Artists, and instructor of the crea-

tive art class for children at the Arts and Crafts Center, has agreed to review the sculpture and crafts section of this year's exhibition. Her summary follows.

Stimulated by an increasing interest on the part of local patrons of art and by the Metropolitan Museum's Contemporary Sculpture Exhibit, to which many members of the Pittsburgh Association submitted work in 1951, regional sculptors are exploiting a variety of permanent materials. Their work is vigorous and competent and shows, for the most part, an understanding of the problems involved in the media they have chosen.

The Carnegie Institute Prize for Sculpture has been awarded to Louise Evans Scott. Her expressive *Man—1952*, a three-foot cherry-wood torso, treats this malleable wood in a plastic way.

Erwin Kalla, a frequent prize winner, has again won the Associated Artists Prize for Sculpture. His powerful, dilative *Horse* dominates the first wall of the galleries.

In the field of architectural sculpture, Prix de Rome artist George M. Koren, with an eye to sunlight, has designed a highly successful panel for the J. S. Mack Community Center gateway in Indiana, Pennsylvania. He was awarded the Society of Sculptors Prize for the best sculpture in permanent material for this panel and an *Archangel Michael* plaque which was commissioned by Calvary Episcopal Church.

Peter Lupori, well known to Pittsburghers as a former prize winner, has this year won the John F. Casey Memorial Award for his devout *Christ in the Garden*, cast in copper.

Another past prize winner and Guggenheim Fellow, Adolph Dioda, has been awarded the Emily Maynadier Arensberg Memorial Prize for his tall, spiraling *Dancer*, the jury's choice for the best wood carving. Its elegance is somehow reminiscent of a Sargeant painting.



MAN—1952 BY LOUISE EVANS SCOTT

The ceramics section is not so representative as usual. One wishes that it were possible for Pittsburgh craftsmen to devote more time to creation of salable exhibition material. Most of our former prize winners teach long hours, so it is understandable that this section is small. Gallery visitors could encourage local craftsmen by creating a market for their wares in this annual exhibit. Among the outstanding pieces in the show are Erwin Kalla's group of five bowls and a plaque, all cleverly decorated with overglaze, which won him the C. Fred Sauereisen Prize for ceramics. Also outstanding are the stained glass panels, *Resurrection* by Helen Carew and *Abraham and Isaac* by Helen Hunt, which shared the Studio Shop Award for the most creative work in crafts. Miss Carew's panel excels in design and Mrs. Hunt's in color.

Mrs. Roy Arthur Hunt's Prize for crafts has again been won by Thomas W. Patterson. His four examples of tooled book-binding provided welcome variety to the crafts section.

In jewelry and metalwork, Lucille Kleber Cantini was awarded the Associated Artists Craft Prize on her group of five pieces of jewelry. All use enameled pieces and show fine craftsmanship.

In the same section, her husband Virgil D. Cantini has again been awarded the Edgar J. Kaufmann Prize for the best enameling on metal. His *Angel of Peace* panel is deep in color and feeling. He has also been awarded this year's Vernon Benshoff Prize for the best work in precious metal. His gold-plated *Chalice*, which brought him the latter award is architectonic in design.

Ruth Robinson, a young weaver, has brought vitality into the weaving section with her textured fabrics. They won her this year's Anne M. Edmundson Memorial Prize for the best hand weaving done on a loom.

To the trustees of Carnegie Institute and its director of fine arts, Gordon Bailey Washburn, the Associated Artists of Pittsburgh is indebted for their splendid cooperation. Also for an ungrateful task for a well-installed show, goes thanks to Henry R. Nash and the employees of the Department of Fine Arts.

Mr. Simboli is president of the Associated Artists of Pittsburgh, an organization of nearly six hundred members. He is assistant professor of architecture at Carnegie Tech, where he did his undergraduate work, and has been on the faculty since 1920. In 1917 he was awarded the Hawthorne Scholarship at Provincetown and three years later the Tiffany Foundation Fellowship at Oyster Bay. Mr. Simboli has exhibited several times in the Carnegie International as well as other galleries and has received numerous awards in the Associated Artists annuals, including a one-man show in 1927. In 1946 he was president of the Pittsburgh Water Color Society. He is founder and head of the Simboli School of Art.

Art and Nature Shop

A GOOD PLACE TO MEET FRIENDS

YOUR LIBRARY OFFERS

MARIE A. DAVIS



THERE is ample evidence to show that Carnegie Library, while well known for its services to children, students, and men of learning, has not been so widely publicized for many other important areas of its operation. Librarians in their role as community leaders have become more and more convinced that the average Pittsburgher is unaware of the convenient telephone information service, the excellent music division, the important work with the blind, and other specialized functions that go on in the Library every day in a quiet but most efficient manner.

For example, many people have the mistaken idea that the reference department caters entirely to students. Helping students is merely one phase of reference activity. The reference department serves as an information center for people in all walks of life. The librarians are kept busy answering questions that come to them either over the desk or over the telephone. During 1951 they answered more than 42,000 questions, many of which were the practical, matter-of-fact type of inquiry listed here:

I'd like the source of this quotation I'm using in a speech this week.

I heard that Senator Taft voted against the North Atlantic Organization, and I'd like to verify it.

How many Queens have ruled England? Does little Charles automatically become Prince of Wales when his mother becomes Queen?

I'd like to refer to the article on the OSS that I read four or five years ago, perhaps in the *Saturday Evening Post*, but I'm not sure.

Is it true that the mean winter temperature in Juneau, Alaska, is higher than it is in Chicago?

Many of our employees are going abroad to work on foreign projects. Will you give them information on climate, living conditions, and people in the countries where they will be stationed?

What is the full name of the chairman of the House Appropriation Committee?

The reference librarians answer these and many other kinds of requests by their

"tools," such as collections of general and specialized encyclopedias, dictionaries, yearbooks and almanacs, quotation books, indexes to magazines and newspapers, batteries of information files and United States government documents. In addition to answering questions, the reference librarians assist readers in the technique of locating and using material.

A natural adjunct to the reference department is the periodical room, where the current issues of general magazines and newspapers are available. In addition to the Pittsburgh dailies, the periodical room receives newspapers from London, Toronto, and the ten largest cities in the United States. There are three microfilm readers for the purpose of viewing filmed records of back issues of the *Pittsburgh Press* and *Post-Gazette*, *The New York Times*, *Pittsburgh Courier*, the *Daily Dispatch* and the *Leader*. Filmed copies of the *Pittsburgh Daily Gazette*, forerunner to the *Post-Gazette*, go back to 1786.

Although it is a general information center, the reference department maintains three divisions, in addition to the periodical room, which are highly specialized in nature. The Pennsylvania Room, opened in 1928, has always functioned as a source for historical data and current information on the Commonwealth of Pennsylvania and



CATCHING UP ON NEWS. PERIODICAL ROOM.

the City of Pittsburgh. Information on the state includes church histories, reports and documents, legislative journals, statute laws, pictures of famous citizens, biographies, scrapbooks, newspaper clippings, names of officials, and other material. Some of the interesting items in the collection on Pittsburgh are death and marriage records from 1786 to 1910, school reports, photographs of persons and buildings, city directories from 1815 to date, and some twenty shelves devoted to books by and about Andrew Carnegie.

The art division is important for its reference and circulating material in fine arts as well as flower gardening, photography, and the collecting of antiques. It is especially strong in architecture and de-



Three Photos by Pittsburgh Photographic Library
A FILE OF WORK IN THE TECHNOLOGY ROOM

sign, as a result of the Bernd Endowment Fund for these subjects. The Fashion Group of Pittsburgh also contributes to the collection on the history of costume and *haute couture*, enabling the art division to stock many expensive and authoritative fashion periodicals and books. Since its establishment in 1930 the art room has dealt with many requests ranging from the highly unusual to the practical and factual.

Like the art division, the music division contains both circulating and reference material in its specialized field. The most important part of the division's collection naturally is music, both in recorded and printed form. There are books and periodicals about all phases of music and about musicians. Questions ranging from the



MUSIC ROOM: SCHUMANN OR SCHOENBERG?

musical theories of Klaudios Ptolemy of Alexandria to the origin of jazz come to the music division every day. Some recordings may be borrowed; others may be played on one of the Library's phonographs with earphone attachments. The reference record collection was established in 1943 as a memorial to David H. Light and is a continuing project of the Friends of the Music Library. This collection, though not large, is comprehensive and an invaluable aid to music students and professional musicians as well as a source of pleasure to many appreciative persons who have little opportunity to hear music elsewhere. Besides the recordings of music, there are some language records, readings of poetry, famous speeches, and a few plays such as Olivier's *Hamlet*.

Another type of recording is located in one of the remote corners of the Library—the Talking Book for the blind. These are books recorded unabridged by leading radio dramatic personalities, and they are played on special machines available free of charge to anyone suffering from a defect of vision making it impossible or unsafe to read ordinary ink-print books. Talking Books are provided by Carnegie Library's division for the blind, which is one of twenty-six regional libraries scattered throughout the country to serve the sightless. Both Braille and Talking Books are sent postage free to blind readers in West Virginia and western Pennsylvania.

The division for the blind also provides ceiling projectors which cast an enlarged image of microfilmed book pages directly

above a bedridden patient's head. A slight touch of finger, toe, or chin governs the movement of pages by remote control buttons. Both the machine and books may be obtained by merely writing or calling the division for the blind. The only requirement is approval of attending physician.

An outgrowth of the reference department, the technology department is a reference and research collection center for the sciences and all branches of engineering. It is especially strong in chemistry and metallurgy, and has an important patent collection. Recognizing the value of the department to the community, the Pittsburgh section of the American Chemical Society raised a fund in 1945 to enable the Library to purchase important materials on technology. The Association of Iron and Steel Engineers has also made generous donations. The technology department maintains photostat services which are used chiefly by engineers and research workers who want copies of articles from technical journals. Over nineteen thousand orders were handled during 1951 at a cost of thirty-five cents a print. These photostat services are also available to other departments of the Library.

Another outgrowth of reference service is the Business Branch, located at 402 Frick Building. It is doubtful that anyone would find "escape" reading here, for the shelves are laden with trade directories, volumes of stock and bond quotations, financial reports, and books on banking, investments, accounting, advertising, labor relations, and personnel management. There are also twenty to thirty thousand pamphlets and government releases and magazines, investment advisory services, and current services on taxes, labor, and government controls. All these materials and many others are used to help business men in their daily activities. Some typical requests handled by this branch are:



A CEILING PROJECTOR IN USE AT CHILDREN'S HOSPITAL

What is the cost of living index for the United States and Pittsburgh in 1930 and 1950, and earnings of workers for same?

Do you have latest sales and profits figures for X company in California?

Who are the officers and directors of Tropical Oil Company?

Must I pay taxes to Allegheny County on the dividends of General Motors?

Under present laws must a company accept a government contract?

How many new cars were registered in Allegheny County last year?

How many radio and TV homes are in the Pittsburgh area?

What would be the job description for an executive vice president?

What are names and addresses of concrete block suppliers in Ashtabula, Ohio?

The other thirteen branch libraries that make up the Carnegie Library of Pittsburgh system are more generalized in their services and are geared to the special interests of smaller neighborhood communi-

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SPECIAL SPRING ORGAN RECITALS

MARSHALL BIDWELL will present six concerts on Tuesday evenings beginning March 25, the week following the final travel lecture in the Division of Education series. Six vocal and instrumental groups, several for the first time, will join Dr. Bidwell in these recitals. Co-ordinating with the great organ of Music Hall, they will offer classical and semiclassical music by composers ranging from the most traditional to ultramodern. The public is invited to these concerts.

The Musicanters, a dynamic group of local singers conducted by Paul F. Brautigan, will be Dr. Bidwell's guests on March 25, at 8:15 P.M.

The Indiana State Teachers College Choir, Wynn York, conductor, will appear the evening of April 1.

One Handel concerto for organ and orchestra will be featured on the program on April 8, when the Duquesne University Chamber Orchestra will be guests, and another on April 15, with the Wilkesburg Civic Symphony Orchestra. James Hunter directs the Duquesne Orchestra and Eugene Reichenfeld, the Wilkesburg group.

Folk songs and dances in costume will be an entertaining part of the evening of April 22 in Music Hall, when Boris Dobrovolsky brings the Stephen Mokranjac Serbian Singing Society to appear with Dr. Bidwell.

The Edgewood High School choir, Janet Floyd, director, will appear in Music Hall for the first time the evening of April 29.

A substantial part of each of the six programs will be organ music played by Dr. Bidwell, well known as the organist and director of music at Carnegie Institute for the past twenty years. Besides his Sunday-afternoon recitals in Music Hall, which for several years have been sponsored by the Arbuckle-Jamison Foundation, Dr. Bidwell travels frequently to other cities to perform under sponsorship of the American Guild of Organists. Within the past year he has given recitals in New York, Washington, Baltimore, Knoxville, Indianapolis, Salt Lake City,

and St. Paul. He is also organist and choir-master at the Third Presbyterian Church, Pittsburgh.

A native of Massachusetts, Dr. Bidwell was graduated from the New England Conservatory of Music and later studied under Widor at Fontainebleau. His extensive repertoire Sunday afternoons each winter in Music Hall includes some five hundred compositions.

The Aeolian-Skinner organ in Music Hall is one of the largest and finest, in one of the most magnificent cases in America. It has 8,600 pipes varying in size from the low basses 32 feet long, 2 feet wide, and half a ton in weight, to the little whistles of the piccolo only a fraction of an inch long.

WORLD PROBLEMS

THREE series of discussion groups are being currently sponsored by Carnegie Library of Pittsburgh.

"The United States Foreign Policy in an Election Year" is the topic for alternate Thursday nights in Central Library at eight o'clock. Future speakers are Albert B. Martin on March 6, Holbert N. Carroll on the 20th, William H. E. Johnson, April 3, and Norman C. Dawes on April 20. There is a small fee for Foreign Policy Association pamphlets.

The series each Wednesday evening at 8:00 o'clock led by Norman C. Dawes on "Our Basic Freedoms" will continue throughout March in the Carnegie Library School classroom A. Topics include Religious, Political, Social-Cultural, and Economic Freedoms, and "The American Dream." The discussions are based on Gerald Johnson's *This American People*.

At Wylie Avenue Branch of the Library the group is meeting on alternate Wednesdays at 8:00 P.M. On March 12 they will hear Homer S. Brown on "Human Rights and World Security;" on the 26th, Louis W. H. Johnson on "Africa—The Legacy of Colonialism"; and on April 9, Norman C. Dawes on "Party Politics and United States Foreign Policy." There is a small fee for F. P. A. booklets.

Fossil Parade

THE CASE OF THE CURIOUS CLAWS

JOHN A. DORR, JR.

To understand evolution, a scientist must be able to comprehend a mass of geological and zoological fact. He cannot do this without systems of classification, hypotheses, theories, and "laws" which make it possible to organize and interpret what he already knows, plan how to find out more, and predict what he is likely to find with a high degree of probability. Without these principles he could not see the forest for the trees.

History shows that scientific generalizations can break down in the face of expanding knowledge, however. Then they must be modified or workable replacements provided. Objectively, the scientist welcomes facts regardless of what damage they may do to theories, but a scientific generalization seldom dies a quick death. This is partly because not all the pertinent facts are acquired immediately or universally known, and partly because scientists are human and not always completely objective when a familiar theory is involved. Generalizations have failed occasionally to fit the facts or to provide the best tools for understanding during the growth of the organic evolution concept, and any number of examples might serve as illustrations, but let us choose one close at hand.

Carnegie Museum possesses a complete skeleton of *Moropus* which is now mounted in the Hall of Fossil Mammals. The left side of this bizarre beast, sometimes called a "clawed ungulate," has been reconstructed to show how the animal probably appeared in the flesh. Consider the interesting history of discovery and knowledge of the family to which *Moropus* belongs.

HISTORY OF DISCOVERY

In 1825 Baron Georges Cuvier, distinguished and influential French compara-



tive anatomist, reported the discovery near Eppelsheim, Germany, of an unusual claw-like fossil toe-bone, a cast of which had been sent to him. Confident in his ability to correlate form and function between fossil and living animals, Cuvier classified the claw as that of an edentate (mammals with teeth greatly reduced, absent, or lacking enamel), a term then meant to include tree sloths, armadillos, pangolins, anteaters, aardvarks, and the extinct ground sloths. Soon afterward the possessor of such claws was given the generic name *Macrotherium* (Great Wild Beast). Similar claws and associated foot and limb bones were rather common in the rocks of Europe, and were found later in several places throughout the world, including the United States. In each case they were classified as having belonged to an edentate.

Meanwhile Kaup (1883), again near Eppelsheim, found some large mammal teeth which he described under the name *Chalicotherium* (Wild Beast of the Gravel). Obvious similarities in tooth structure led him to believe that the animal was related to the rhinoceroses. His conviction was not shared by all taxonomists (specialists in animal and plant classification), however. During the following half century the genus *Chalicotherium* and related genera, collectively called chalicotheres (Family Chalicotheriidae), were successively placed in several different ungulate (hoofed mammal) groups. Huxley (1870) classified *Chalicotherium* and an extinct South American animal, now known to have had a separate origin, in the same group. Gill (1872) considered chalicotheres to belong to the mammal Order Artio-

dactyla which, in addition to several extinct types, now includes pigs, sheep, goats, antelope, cattle, deer, hippopotamuses, giraffes, and others; the so-called "even-toed" ungulates in which the main axis of support passes between the more or less elongate third and fourth digits. Gaudry (1875) placed chalicotheres in the Pachydermata, a loose-knit group then intended to include various thick-skinned, generally large, hoofed mammals now known to have had diverse origins, particularly elephants and rhinoceroses, but also hippopotamuses, tapirs, horses, pigs, and others. In 1881 E. D. Cope, brilliant American paleontologist, referred the chalicotheres to the well-defined Order Perissodactyla, which includes a number of extinct types of mammals in addition to horses, rhinoceroses and tapirs; the "odd-toed" ungulates in which the main axis of support in each foot passes through the elongate third (middle) digit.

During this time other specimens of the curious claws were discovered but doubt began to arise as to whether they had belonged to edentates. A peculiar fact was that claws and feet of the *Macrotherium*-type were rather consistently found in the same areas and geologic levels as chalicotheres skulls and teeth, but neither skulls of the former nor feet of the latter had yet been recognized or described in association. In 1887 suspicions were confirmed and the

case of the curious claws was solved when Filhol announced the discovery of a partial skeleton, all bones of which unmistakably had belonged to the same animal, combining *Macrotherium*-like feet with a chalicotheres skull.

Solution of this case did not end all problems of classification, however. The immediate reaction of many taxonomists was disbelief that a perissodactyl could have had claws. Cope, among them, responded to the apparent inconsistency by quickly proposing that chalicotheres be placed in an order by themselves. His proposal received some support, but in 1898 Osborn returned them to the Order Perissodactyla as a distinct superfamily and there they remain.

CARNEGIE'S CLUES TO THE CLAWS

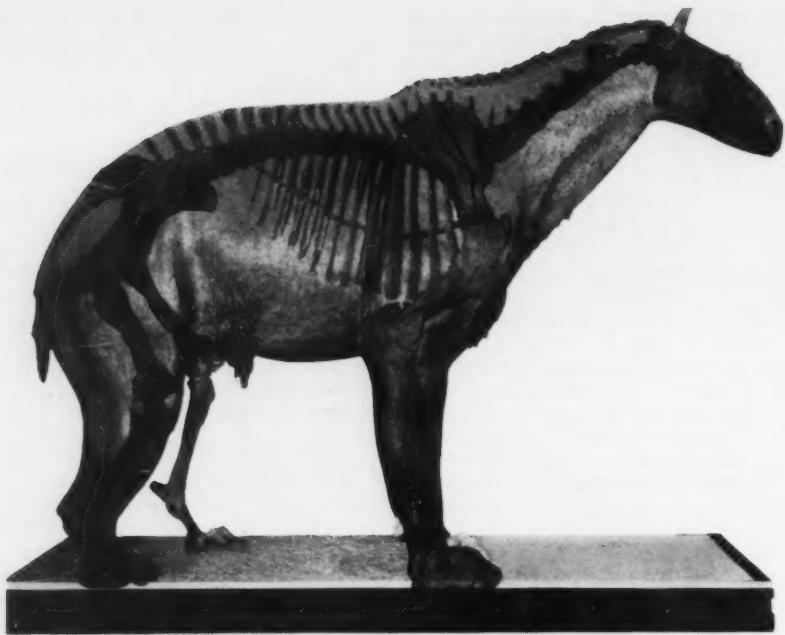
Subsequently Carnegie Museum was able to make a substantial contribution to knowledge of the chalicotheres. In 1904 O. A. Peterson was directed to fossil beds, afterward known as the Agate Springs Locality, situated along the Niobrara River, about twenty-five miles southeast of Harrison, Sioux County, Nebraska. There, from 1905 to 1907, Carnegie parties excavated the large *Moropus* skeleton now exhibited, the first complete skeleton of a chalicotheres ever found anywhere. This excellent specimen enabled W. J. Holland, then Museum director, and Mr. Peterson

to describe the osteology of a typical chalicotheres in detail. Their important study, published as Volume III, No. 2, of the *Memoirs of the Carnegie Museum*, reaffirmed and fully established the affinities of the chalicotheres as a distinct superfamily of the Order Perissodactyla. Within that order, chalicotheres are now thought to be more closely related to the horses, extinct brontotheres, and their ancestors than to the tapirs and rhinoceroses. One plausible function suggested for the stout claws is that they were used for grub-



Scott's "Land Mammals in the Western Hemisphere"

MOROPUS RESTORED FROM THE SKELETON IN CARNEGIE MUSEUM



MOROPUS ELATUS SKELETON AND RECONSTRUCTION (shoulder height 6½')

bing up roots and tubers, another that the animals reared on their hind legs using the claws to pull leafy branches down within reach of their mouths, but certainty in this matter is impossible in the absence of similar related living animals.

CONCLUSIONS FROM CLAWS

The above account partly illustrates the growth of the organic evolution concept and its effect upon the philosophy of animal classification. The student of today would be deeply concerned if he so mistook the ancestor-descendant relationships of an animal as to place it in the wrong order. Such errors can be and still are made, but are usually due to the inadequacy of a specimen or insufficiency of knowledge of ancestral forms. Cuvier would not have had the same reason for being disturbed by such a lapse, however, since he did not expect his system of classification to indicate degrees of hereditary relationship. Although often considered the founder of both modern comparative anatomy and vertebrate paleontology, that brilliant scientist was actively opposed to the then

new concept of evolution. He believed that successive faunas through geologic time had been catastrophically destroyed and the earth repopulated after each catastrophe by the few survivors. New species in successive faunas were supposed to have migrated from unknown lands, not evolved from other species.

We must not be too critical of Cuvier's readiness to infer the nature of an unknown animal solely from the form of a single toe-bone. (Public belief frequently to the contrary, this practice is not extensively in vogue among paleontologists today.) He, like others for years to follow, was simply not in possession of sufficient facts. He could not have imagined the multiplicity of animal life as it had existed in the past or the possibilities for duplication of organic form and function in animals only remotely related, even if he had been prepared to accept hereditary relationship of species and larger groups as possible in the nature of living things.

A mass of paleontologic fact has been accumulated since Cuvier's time. This evidence leads to the realization that when

two or more different animals, perhaps only remotely related, are enabled by natural selection and their inherent capabilities for change to evolve structural adaptations which will function satisfactorily in similar ways of life, they often come to resemble one another very closely.

A good example is the geographically isolated marsupial (pouched mammals) fauna of Australia. There marsupials were separated from placental mammals for more than sixty million years, on a continent which offered a wide variety of possible ways of life, many of which were closely similar to those found on other continents. Australian marsupials underwent an evolutionary adaptive radiation which resulted in a wide variety of structural types. Each type was fitted for a particular environmental situation. Some of the situations were nearly identical with those occupied by certain placental mammals on other continents. In such cases a remarkable similarity of form and function known as convergence developed, so that it is frequently difficult to distinguish marsupial from placental on the basis of the form of certain portions of their skeletal anatomy without reference to the whole.

A somewhat similar history, beginning at a later date, is recorded for the marsupial fauna of South America.

The early hesitancy of Cope and others to classify an animal with claws in an order otherwise limited to hoofed forms was the result of an over-extension of the theoretical proposition that evolution is "irreversible." While it is true that once a particular organ or part has been completely lost and its stimulus to develop eradicated from a genetic system it cannot reappear per se, it does not follow logically or in fact that the structure, if it still persists, cannot be remolded to resemble an ancestral form or serve an ancestral function. All the mammalian orders that acquired hoofs did so by modifying claws, but cases are now known where certain groups within three ungulate orders redeveloped claws, and reversals of many other types have been recognized.

Dr. Dorr has been assistant curator of vertebrate fossils at Carnegie Museum since last June. He did both his undergraduate and graduate work at the University of Michigan.

IN MEMORIAM

ON Tuesday, February 12, Carnegie Library of Pittsburgh, Carnegie Institute, and Carnegie Institute of Technology suffered a great loss in the death of William Singer Moorhead, who had been a member of their boards of trustees since October 28, 1927.

Mr. Moorhead's keen mind and varied interests contributed materially in the development of these institutions and the expansion of their public service. He served with devotion on the Library, Fine Arts, and Auditing Committees. He was especially active in the work of the Executive Committee of Carnegie Institute of Technology, and his counsel was invaluable in the negotiations that led to the establishment of the School of Industrial Administration, William Larimer Mellon, founder.

His civic interests were many. He served as president of the Tuberculosis League for ten years and was also president of the Pittsburgh Law Club. He acted as chairman of the organizing committee of the local Community Chest. Mr. Moorhead was a trustee of the Frick Art Reference Library of New York. From 1935-37 he was chairman of the Yale Alumni Board and from 1922-24 was chairman of the United States Tax Simplification Board.

Founder and senior member of the law firm of Moorhead and Knox, he was a graduate of Lawrenceville School, Yale University, and the University of Pittsburgh law school. From 1909 to 1918 he lectured at the University of Pittsburgh.

Mr. Moorhead was a member and trustee of the Shadyside Presbyterian Church.

His associates on the boards of trustees will greatly miss his good counsel, his genial companionship, and the cordial friendship that they so much enjoyed.

GALÁPAGOS ISLANDS

[Continued from page 85]

take one of each species of fauna. What will happen when we take aboard one of the great *galápagos*?

[To be concluded]

Dr. Eisaman is on the staff of the Elizabeth Steel Magee Hospital and associate professor of obstetrics at the University of Pittsburgh. His many friends in the city enjoy the illustrated talks and written accounts he gives about his unusual vacation trips.

A QUARTER CENTURY FOR CARNEGIE MAGAZINE

THIS month marks the conclusion of twenty-five years of publication of CARNEGIE MAGAZINE. First issued in April 1927 as *Bulletin of the Carnegie Institute*, it was a thirty-two page monthly (ten times each year), in form not very different from now.

Its purpose in the words of Editor Samuel Harden Church was: "To make friends—and more friends—for these Carnegie institutions [the Institute, Library, and Institute of Technology] and to enlarge their field of service by securing that degree of understanding and sympathy among the people which is so necessary to a fulfillment of their destiny."

The first number briefly described the various departments of the three institutions and reprinted an address by Col. Church outlining a financial policy for the future. The cover carried a photograph of the late Willis F. McCook, who had inaugurated the Patrons Art Fund to purchase paintings for the Permanent Collection. A main feature of subsequent issues was the reporting of gifts to the institutions, particularly in a section entitled, "The Garden of Gold."

Succeeding presidents have continued as editor: William Frew and, today, James M. Bovard. Associated with the editors have been, in turn, assistants: Minnie C. Rankin, Emily Alter Werkhiser, Dorothy Nuttall, and Jeannette F. Seneff, with Florence A. Kemler handling the advertising when its insertion was begun in October 1948.

CARNEGIE MAGAZINE has always been printed by Carnegie Institute Press which William H. Wunderlich heads. The MAGAZINE is printed on Warren's Cumberland Dull in Monotype Garamond. Liberty Engraving Company and Conemaugh Engraving Company have made the halftones.

During the early years a number of full-color reproductions of paintings and exhibits appeared on the cover, but increasing costs have made this prohibitive. The MAGAZINE was expanded to 36 pages in 1948 and strips of color added to the cover.

In the last four years the MAGAZINE has extended its scope somewhat to embrace the civic and cultural life of Pittsburgh generally, reporting on other institutions

and outside projects, with an occasional travel article by a returned resident. Today its purpose is stated simply as: "Dedicated to literature, science, and art"—the words inscribed on the Forbes Street facade of the Institute.

The circulation at present is approaching 6,000, over half of these being members of Carnegie Institute Society. Copies nearly circle the globe, going as far as India, Australia, West Africa, Venezuela, and many European countries.

IN GERMANY

[Continued from page 89]

Carnegie Museum exhibits showing his and Mrs. von Fuehrer's work on botanical dioramas and murals and the taxidermy of Santens and Clement, and those portraying the size and execution of the Roosevelt Hall with Carl Akeley's lions in bronze and the Carl Akeley Memorial Hall at the American Museum of Natural History were much admired. The presentation concluded with a comparative study of conditions in Germany and the United States.

"This joint lecture was received with great interest and enthusiasm. The Ministry of Culture requested a copy, and Mr. Mielke was asked to repeat it in other German museums."

YOUR LIBRARY OFFERS

[Continued from page 96]

ties. But they, along with the central Library and its many departments, of which only a few have been mentioned in this article, continue to feature practical books and services relating to dominant industries and vocations of this area.

Miss Davis has been head of public relations at the Carnegie Library of Pittsburgh since 1947 and previously was in the Public Affairs Room. She represents the Library in many civic organizations and speaks frequently before groups on its activities. A graduate of Margaret Morrison Carnegie College and of Carnegie Library School, she is the author of *Libraries in Allegheny County Today and Tomorrow*, a summary of the Allegheny County Library Survey, published this autumn by the Allegheny Conference on Community Development. She is president of the Pittsburgh Library Club.



Heinz Collection . . . Carnegie Institute

From far Places

AFRICA, source of the best ivory, has produced some of the most direct and satisfying work in this medium.

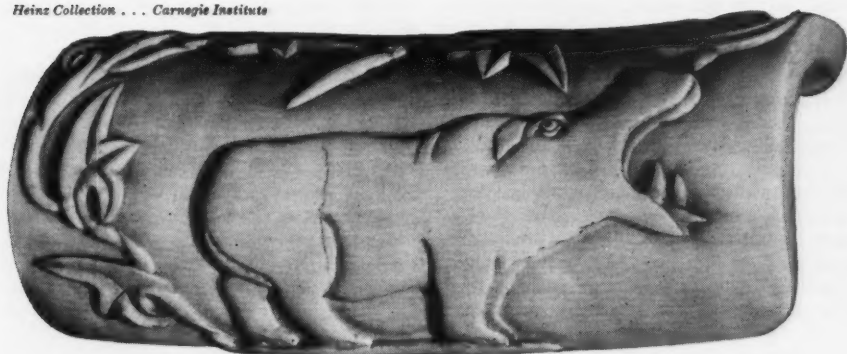
- Examples are less prevalent than from other cultures, where ivory has been carved with a profusion bordering on the commonplace. But the rare old pieces that exist—musical instruments, bracelets, masks, and figures—have the elements of art.

- They are simple without being sparse. Their vitality, tension, and three-dimensional sense belong in the area of sculpture. The object seems to spring directly from the tusk as though it were a natural expression; the subject matter is familiar and deeply personal to the artist . . . attributes obvious in these delightful jungle scenes.

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Heinz Collection . . . Carnegie Institute



THE BOOKWORM TURNS

M. GRAHAM NETTING

A TROGLODYTIC HARBINGER

IN the busy modern world even those of us who are biologists may become so preoccupied with the doings of our own species that the latest achievements or the current misbehaviors of man monopolize our attention. In so doing we sadly limit the time available for reflection upon the profound mysteries of life. Inherited animal behavior patterns, popularly called instincts, have been studied intensively and some explanations, not wholly satisfactory, of their development have been offered. Far more difficult to explain, and perhaps unexcelled biological evidence of the existence of a supremely intelligent Creator, are those numerous instances of intricate and exactly timed intermeshings of complex behavior patterns of unrelated species.

As a relatively simple case in point I offer a plant-salamander liaison that may be observed in March or April in our own region. A six- to nine-inch purplish black salamander, distinctively marked with a row of large yellow or orange spots on either side of the mid-line of the back, occurs commonly in the forested portions of the eastern half of the United States. Interestingly enough, a hundred times more persons have seen the eggs of the spotted salamander (*Ambystoma maculatum*) than the creature itself. Although 95 per cent of its life is spent underground and the brief remainder in dark, icy waters, the sudden appearance of its eggs in woodland pools heralds the imminence of spring.

When I began my herpetological career there was no satisfactory method of predicting when spotted salamanders would emerge for their brief annual fling. In the late 1920s, however, the enigma was solved by the late Frank N. Blanchard, one of the ablest students of amphibian life histories this country has produced. He learned that as soon as the ground thaws in the spring, the spotted salamanders that had hibernated safely below frost line are poised—if this term may be used for a fossorial creature—for their

exciting season. The trigger which starts them upon their migration down slope to the nearest pond is always rain. A rain that falls steadily throughout the day or the afternoon may bring the salamanders to the surface, but one of their behavioral peculiarities is that they crawl only during rain at night or toward dusk on a very dark, cloudy day. Males are more active than females and customarily reach the ponds first, perhaps because the females are so heavy with eggs that their speed of movement is reduced. Temperature, so long as it is not severe enough to freeze the ground, has little effect upon the ardor of these salamanders although they may walk faster in a warm rain. Frequently there is still ice on the ponds when the first salamanders arrive; on these occasions observation is easy but the herpetologist is often discomfited by plunging through weakened ice into water over his boot tops.

Upon reaching the pond the males patrol the shore until the first females enter the water. Immediately a nuptial ballet ensues, with five to fifty males swimming about one female in an undulatory aquacade. After these gyrations have proved sufficiently stimulating to the female—and how this moment is judged, only male spotted salamanders "know"—the males go to the bottom and move slowly along straddling a submerged twig, leaf edge, or other debris and depositing small pyramids of jelly, each of which is topped with a white cap containing sperm. The female in turn descends to the bottom and neatly picks off with the lips of her cloaca one or more conveniently placed sperm caps. Shortly thereafter she begins

Dr. Netting plans occasionally to substitute a natural-history column for his monthly "The Naturalist's Bookshelf," when, as he says, "the bookworm doesn't have time to digest a book." He is assistant director of the Museum and curator of amphibians and reptiles, and is also assistant professor of geography at the University of Pittsburgh.



Photo by Hal H. Harrison

SPOTTED SALAMANDER

to lay numerous tiny eggs accompanied by a gelatinous fluid that quickly absorbs water and swells into a jelly-like mass. An individual female may produce one or two large, or as many as a dozen small masses with consequent wide variation in the number of eggs in each. The average, fist-sized mass probably contains about a hundred eggs.

The jelly may be clear and translucent or it may be cottony white. Any cottony white masses of eggs seen floating in a local pond are proof positive of the presence of spotted salamanders, for no other amphibian in our area produces such an egg mass. Both types of egg masses develop equally rapidly, and hatching occurs in from 31 to 54 days, depending upon water temperature.

Now we come to the complex interrelationship of living things to which I referred in the opening paragraph. The motile stage of a tiny one-celled green alga penetrates nearly every egg mass within six hours and begins to multiply. The studies of Perry W. Gilbert at Cornell University have established the fact that this is a mutually beneficial relationship. The carbon dioxide and nitrogenous wastes produced by each living embryo are utilized by the algae. Addition of oxygen and removal of wastes by the algae hasten the development of the embryos, so that the eggs hatch earlier, and the hatchlings are larger in size than those from uninfected, experimental egg masses. Spotted salamander eggs can develop without the algae

and the plants can grow elsewhere than in the egg mass, but there is far more mutuality in this relationship than in the case of a "mutual" laundry! The same alga often occurs in wood frog eggs, and sometimes in Jefferson's salamander egg masses, but never develops in other amphibian eggs in the same pool.

Ninety per cent of the spotted salamander population of a small woodland may reach the breeding pool on the same night because each individual responds to the identical hyetal stimulus. Virtually all leave the pond during the next prolonged night rain and disappear underground for another 52 or 53 weeks. In cool, moist situations occasional specimens may be surprised under rocks or logs in summer, but around Pittsburgh few if any adults are encountered except accidentally in the course of excavating. What is the homeowner's loss may be the herpetologist's gain, for at long intervals numbers of spotted salamanders may be attracted to an underground drain and succeed in clogging it so effectively that a plumber must be summoned to remove the unknown obstruction.

After hatching, the larvae are about one-half inch in length and dull greenish-yellow in color with numerous small black dots and no trace of the yellow spots of their parents. In the ensuing two to four months the larvae attain a length of 2 to 3½ inches and transform into miniature spotted salamanders almost as shy and retiring as their parents. They may be found briefly in masses of wet leaves or suitable situations around the margin of their home ponds, but September usually finds them safely hidden underground. Their second year is spent beneath the surface, so half-grown youngsters are even scarcer in museum collections than larvae and adults.

In spite of the brevity of its annual appearance the spotted salamander has been recorded in 55 of Pennsylvania's 67 counties. Even so, additional reports are urgently needed to amplify the records of the Pennsylvania Herpetological Survey, currently being conducted by Carnegie Museum. Volunteer observers can aid materially by reporting the first date upon which the telltale cottony masses appear in ponds in their vicinity.



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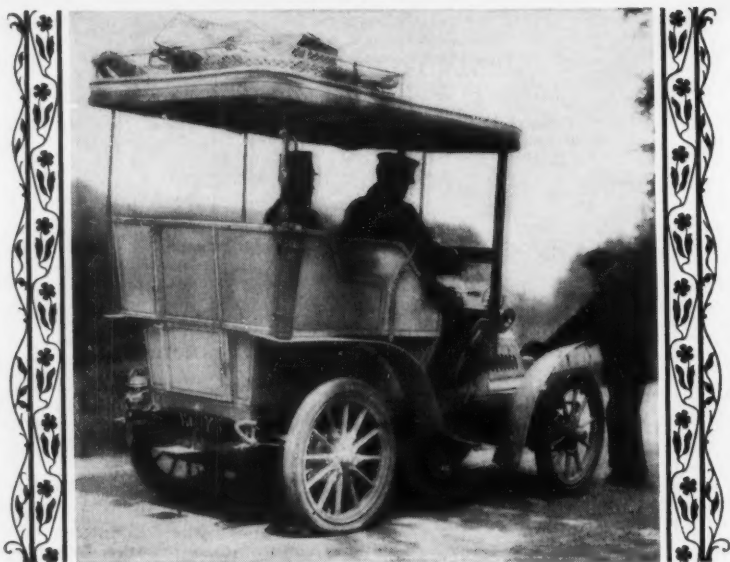
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